95% Design Review
(Response to TT's comments)
KABUL UNIVERSITY MEN'S DORM
drawings dated February 19, 2011
WO-LT-0015

Response Legend
A - Agree
D - Disagree
O - Out of Scope
AE - Agree with exception

Comment #	Reviewer	Reference	Comment	Response Code	Response	Back-Check
STRUCTURAL COMMENTS MEN'S DORM BUILDING 01						
S1	FRS	General	Calculations and specifications not provided to verify drawing design details. No associated drawings provided to confirm compatibility with building and site grading.	A	Calculations, specification and key plan specifying location and elevations will be provided in the next submittal	Acknowledged.
S2	FRS	Ramp Geometry	Ramp slope is about 1:8 which is steeper than (IBC 10.10.2) maximum of 1:12 for egress ramps.	D	Slope is 8% or 1:12, rise =0.73m and Length=8.864m	Comment withdrawn.
S3	FRS	Ramp Geometry	Verify adequate ramp width to accommodate a minimum clear width of 914mm between intended handrails (IBC 1010.6.2) and considering location of handrail. And verify ramp width adequate for the number of occupants in building.	A	Details can accommodate width more than 914mm as per IBC 1010.5.1 Ramp is for handicapped having both side of the main entrance. Dimension will include on the next submittal.	Acknowledged.
S4	FRS	ST-101	Indicate adequate finish type for concrete ramp/platforms.	A	To be included in the next submittal.	Acknowledged.
S5	FRS	ST-101	Note 4 is not clear. Reviewer notes that mix water for concrete should be potable quality water.	A	will incorporate comments on next submittal	Acknowledged.
S6	FRS	ST-101	What is purpose of plinth beam - is it required to limit the braced length of the Line 1 columns? Not shown on typical footing section.	AE	Plinth beam and grade beam limits differential settlement and contribute to frame action. Plinth has been provided only on grid 1 as that is the only reasonably above ground. It will incorporate in next submittal.	Acknowledged.
S7	FRS	ST-101	Note 20 refers to pour strip, but not shown on drawings.	A	It will be incorporate in the next submittal	Acknowledged.
S8	FRS	ST-101	General Note 8d - 20mm slab bar clearance not appropriate for exterior exposure, ACI Code indicates 40mm minimum clearance to primary reinforcement.	A	To be included in the next submittal.	Acknowledged.
S9	FRS	ST-102	Show beams on Section 1.	A	to be incorporate in the next submittal	Acknowledged.
S10	FRS	ST-102	Show intended construction joint locations and typical detail.	A	It will be included in the next submittal	Acknowledged.
S11	FRS	ST-102	Show intended slab contraction joint locations and typical detail. This is important to minimize crack widths and provide a more aesthetic surface.	D	Ramp structure is reinforced concrete and the entire length of ramp is less than 13m which is less than the requirement for an expansion/contraction joint.	Concern was for early-age cracking. The #10@125mm top bars are about 0.3% reinforcement, where ACI 302.1R-04 considers slabs with 0.5% reinforcement located within 50mm or t/3 can eliminate joints. This is very close, and should be designer's decision and consideration should be given to appropriate concrete mix design and curing. No further comment.
S12	FRS	ST-102	Show handrail anchorage detail into ramp concrete.	A	It will be incorporate in the next submittal	Acknowledged.
S13	FRS	ST-102	How is bottom edge of ramp at El 0.0 supported? Only one side is supported into short column B4. Should there be an edge beam supporting bottom edge of ramp founded below frost line instead of B4 on spread footing?	D	We don't feel the beam is necessary. It may cause upheaval stresses due to frost action. Also it will cantilever from the column on B-3	Acknowledged.
S14	FRS	ST-102/103	Show beam outline on Section 1	A	It will be incorporate in the next submittal	Acknowledged.
S15	FRS	ST-103/104	Framing Plan - Show all reinforcement symbols on extent arrows.	AE	Please clarify comments. Symbol "a" shown in the drawings indicates rebar size.	
S16	FRS	A01 Underground Tank	Underground tank plan and section do not provide structural detail. It issued that the tank is new work.	A	Details and calculation will be provided in the next submittal.	Acknowledged.

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S17	FRS	A01 Underground Tank	Southerly, exterior tank cell wall applies an unbalanced lateral earth load to the interior 350mm tank wall - concern that interior wall will not be sufficient as shown, subject to the full tank liquid load without bracing along it's height. A partial height concrete wall extending to the northerly wall may be necessary and could be provided up to the stair landing level.	A	This load condition has been evaluated in structural design. Both tanks full, empty and alternate tanks full have been evaluated along with and without earth pressure. Calculation will be provided in the next submittal.	Acknowledged.
S18	FRS	A01 Underground Tank	If the tank is located where vehicle wheel loads can surcharge the roof slab and wall, must be included in the structural design or specify/detail curbing or bollards located on plans to prevent vehicular live loads within the influence zone.	AE	Bollard will be provided so no vehicular loads on top of reservoir. Although we considered 5Kpa as live load on structural slab. It will be incorporate in the next submittall.	Acknowledged.
S19	FRS	A01 Underground Tank	What is the function of the cavity wall beyond tank? Is it structural?	AE	It is to control humidity in the pump room & hide any damp patches if at all. Past experience prove this to be effective. It is a non structural wall.	Acknowledged.
S20	FRS	A01 Underground Tank	Consider effects of buoyancy on the partial and finished structure. Base slab heels may provide economical method to resist buoyancy of empty tank. Assumed, seasonal high groundwater should be indicated.	AE	No water table was encountered to depth of excavation. Bouyancy is not required to be checked. However tank empty condition considers concern of upward pressure on the raft. Calculation will be provided.	Acknowledged.